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BUTTERFLIES OF THE UPPER JARDINE RIVER, CAPE YORK PENINSULA

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Abstract

Forty species of butterflies are recorded from the Jardine River basin. *Telicota eurotas laconia* Waterhouse has not previously been recorded north of the Claudie River (Iron Range), and the known distributions of *Toxidia inornata inornata* (Butler) and *Philiris fulgens kurandae* Waterhouse are marginally extended northwards. Rain forest areas (semi-deciduous mesophyll closed forest) are mapped in detail for the first time and facts concerning river navigation are presented for the benefit of those wishing to enter this little known area.

Introduction

The Jardine River is situated in the far northern portion of Cape York Peninsula (Fig. 1). Although Queensland's largest perennial river its upper reaches have remained unexplored and very little is known of the zoology of this remote area. The first botanical survey of the Jardine River catchment has only recently been made (Lavarack and Stanton, 1977): vegetation types were mapped on a broad scale and extensive areas of closed forest in the upper Jardine basin recorded. Rain forest also occurs immediately to the east and south-east of the Jardine basin in the vicinity of Shelburne Bay (Pedley and Isbell, 1971). These recently discovered rain forests form an area of special biological significance because of its location between the rather different rain forest communities of Cape York and Iron Range. Monteith and Hancock (1977) list the butterfly fauna from the rain forests near

Shelburne Bay. In this paper we list species from the rain forests of the Jardine basin.

The vegetation along the river for much of its length is dominated by *Melaleuca leucadendron* and *Leptospermum longifolium*. The stands of rain forest (semi-deciduous mesophyll closed forest) are limited in extent and occur only along the upper portions of the river. All are riverine in nature with the largest stand covering no more than a few hectares. Almost without exception these rain forest areas are associated with permanent creeks. Predominant canopy trees are *Beilschmiedia obtusifolia* and *Syzygium rubiginosum*. Palms are a prominent feature and many species were encountered, the most conspicuous being *Livistona benthamii* which appeared to be the most widespread species and the large and beautiful fan palm, *Licuala ramsayi*, and the wait-a-while, *Calamus australis*. All notable stands of rain forest encountered were mapped and are shown in Fig. 1.

For the benefit of others planning to visit this area we add the following notes. Our investigations began at the point where the telegraph track crosses the river, from which point we travelled upstream. Canoes were chosen as the mode of transport, although prior to departure we were uncertain if such craft could negotiate the river. The Jardine is a large river and flows with quite a strong current. As no one had previously navigated its upper reaches we had no idea what problems might be encountered. As it turned out there were few real obstacles. The strong current caused the greatest hardship and produced some very weary canoeists. The first day we covered only 5 km. Thereafter we averaged approximately 10 km per day. We travelled constantly for eight days after which we reached a stand of "quality" rain forest about 1 km before the junction of the McHenry River. Here we established a base camp and later travelled upstream for another day to the next major junction. Beyond this point it was impossible to go further by canoe because many fallen trees completely spanned the stream. We had at this point travelled more than 80 km from the telegraph track crossing.

One of the more remarkable features of the river is its almost constant gradient. The river bed is white sand and the banks are sandy in nature. The only exceptions are two sets of rapids, the first some 53 km from the crossing and the second about 57 km. Both are formed principally from sandstone-like rock and can be negotiated with care. We were travelling during October (towards the end of the dry season) and the river level was comparatively low. Water depth averaged a little over 1 m near the crossing and about 0.3 m upstream. Extensive shallows were encountered and numerous submerged tree limbs were a constant hazard. The water was crystal clear but there was the occasional dark deep pool. One large crocodile (over 3 m long) was seen in such a pool. Crocodile tracks were seen elsewhere. Large catfish and the barrimundi, *Sclerophages jardini* were plentiful along the entire length of the river almost as far as the McHenry junction, but especially so below the rapids.

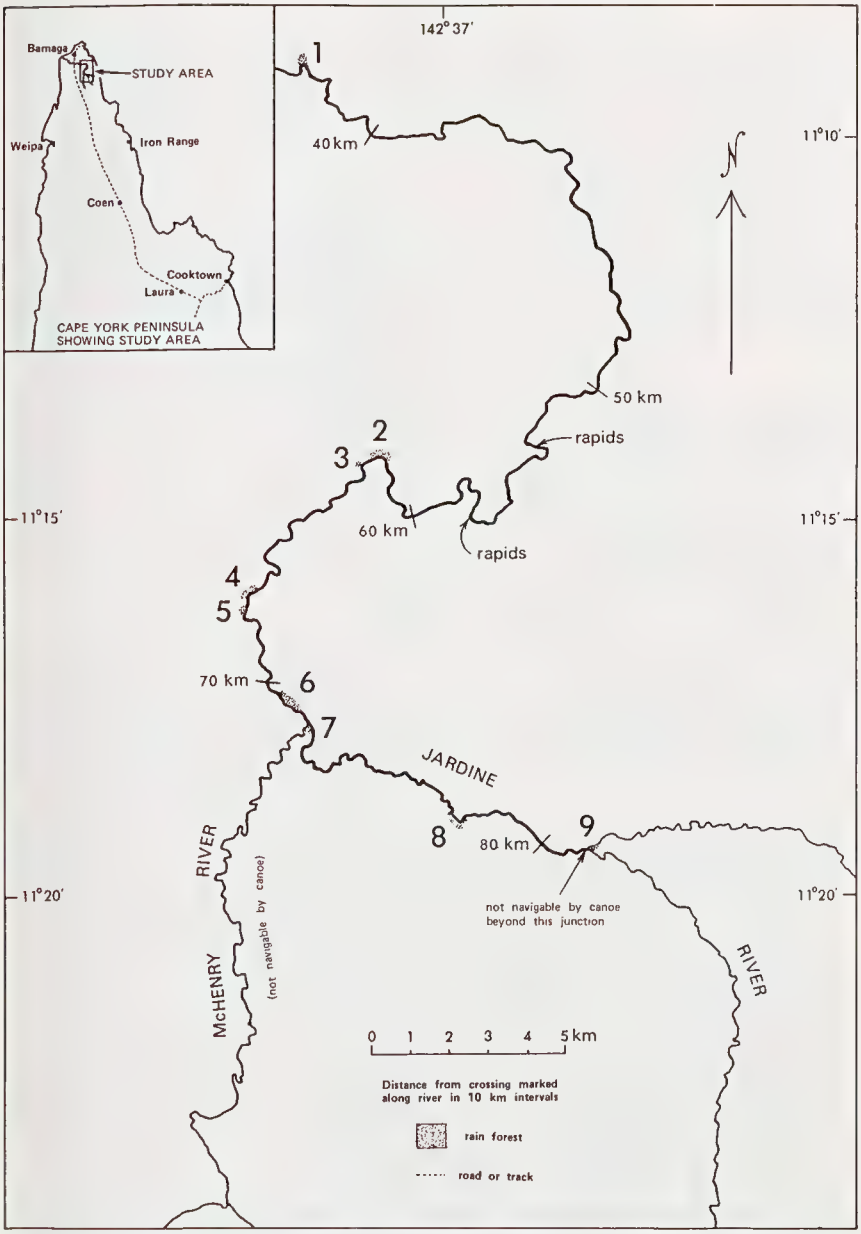

Fig. 1. Map of the upper Jardine River showing rain forest areas (numbered for reference 1-9).

List of species

All records, October, 1978. Rain forest areas referred to below by numerals are those shown in Fig. 1.

Species	Comments
HESPERIIDAE	
Tagiades japetus janetta Butler	Very common
Toxidia inornata inornata (Butler)	One specimen only. Previously recorded as far north as Shelburne Bay (Monteith and Hancock, 1977).
Telicota eurotas laconia Waterhouse	Three specimens taken on the northern side of the crossing amongst *Gahnia*. Two others taken in a small *Gahnia* swamp on the southern bank below rain forest area 1 at 142°33′E, 11°10′S. Previously unknown north of the Claudie River (Common and Waterhouse, 1981).
Telicota mesoptis mesoptis Lower	Very scarce
Sabera caesina albifascia (Miskin)	Plentiful
Sabera dobboe autoleon (Miskin)	Very scarce
PAPILIONIDAE	
Papilio aegeus aegeus Donovan	A few seen
Papilio ulysses joesa Butler	Several seen at various locations along the upper portion of the river.
Pachliopta polydorus queenslandicus (Rothschild)	Scarce
PIERIDAE	
Delias argenthona argenthona (Fabricius)	Common
Delias mysis waterhousei Talbot	Common in most rain forest areas.
Delias aruna inferna Butler	Common only in rain forest areas 6 and 7. Two specimens sighted at area 1.
NYMPHALIDAE	
Danaus affinis affinis (Fabricius)	Uncommon
Danaus hamatus hamatus (W. S. Macleay)	Uncommon
Euploea sylvester sylvester (Fabricius)	Very common but only at one location a little below rain forest area 2.
Tellervo zoilus gelo Waterhouse and Lyell	Common only in rain forest area 7.
Melanitis leda bankia (Fabricius)	Uncommon
Mycalesis terminus terminus (Fabricius)	Uncommon
Mycalesis perseus perseus (Fabricius)	Uncommon
Hypocysta irius (Fabricius)	Uncommon
Hypocysta adiante adiante (Hübner)	Uncommon
Xois arctoa arctoa (Fabricius)	Uncommon
Neptis praslini staudingereana Nicéville	Uncommon
Pantoporia venilia moorei (W. J. Macleay)	Uncommon
Pantoporia consimilis consimilis (Boisduval)	Uncommon
Doleschallia bisaltide australis C. & R. Felder	One specimen only
Hypolimnas bolina nerina (Fabricius)	Very scarce

Species	Comments
Hypolimnas alimena lamina Fruhstorfer	Uncommon. One very melanic ♀ amongst material taken.
Junonia hedonia zelima (Fabricius)	Very scarce
Junonia orithya albicincta Butler	Very scarce
Cupha prosope prosope (Fabricius)	Uncommon
LYCAENIDAE	
Pseudodipsas eone iole Waterhouse & Lyell	One specimen only
Philiris fulgens kurandae Waterhouse	Uncommon. Found only at one location above the uppermost rapids. Previously recorded as far north as Shelburne Bay (Monteith and Hancock, 1977).
Philiris innotata evinculis Wind and Clench	One specimen only
Arhopala micale amytis (Hewitson)	Locally common
Hypolycaena phorbas phorbas (Fabricius)	Uncommon
Deudorix epirus aginar Fruhstorfer	One specimen taken in rain forest area 8.
Candalides helenita helenita (Semper)	Common
Candalides geminus Edwards and Kerr	Common
Praetaxila segecia punctaria (Fruhstorfer)	Five specimens from rain forest areas 2, 3, 6 and 7.

Discussion

Conditions at the time of our survey were rather dry which, no doubt, reduced the number of butterflies on the wing. Few specimens were seen outside of rain forest areas and consequently little was encountered along the lower half of the river travelled. The notable exception was *Telicota eurotas* taken in shaded situations at the telegraph crossing and a little further upstream.

The number of Hesperiidae encountered was surprisingly low. Only six species were taken and four of these only in small numbers. Despite the numerous palms growing in the area no palm-feeding species was taken.

In contrast, Pieridae were comparatively common. *Delias mysis* was plentiful and occurred in most areas of rain forest. *D. aruna* was plentiful until about 9 am each morning in rain forest area 6 (refer Fig. 1), where specimens flew high in a small clearing. Later each day several adults could always be found settled on leaf litter in rain forest area 7 at the junction of the Jardine and McHenry Rivers. When disturbed these specimens would usually fly a short distance and resettle. Both males and females adopted this behaviour. *D. argenthona* was less common but widespread.

The behaviour of the lycaenid *Praetaxila segecia* is also worthy of comment. Specimens were only found as isolated individuals settled amongst leaf litter within deeply shaded rain forest (areas 2, 3, 6 and 7 in Fig. 1).

Despite a constant search for *Ornithoptera priamus* (L.) none were sighted at any time during the three weeks we were in the area. This often common species was also absent from the list of 98 species given by Monteith and Hancock (1977) from the Shelburne Bay region which includes rain forest areas immediately to the east and south of the Jardine River catchment. There are no other known specimens from the region and the statement made by Haugum and Low (1978, p. 142) that "Scattered populations exist in the Jardine River valley forests . . ." is incorrect and based purely on assumption. Lavarack and Stanton (1977) do not record *Aristolochia*, the only food plant of *O. priamus*, from the region. Their paper, however, was not intended to be detailed in its listings. We therefore made an extensive search for this vine during our studies but it appeared to be entirely absent. These findings suggest that *O. priamus* is either permanently absent from this region or occurs only on rare occasions. If this is so the geographical isolation of subspecies *macalpinei* Moulds is indeed real and the unique characters displayed by the adult confirm its subspecific status despite doubts expressed by D'Abrera (1976) and Haugum and Low (1978).

Our observations of the habitats encountered along the upper Jardine leave us no doubt that the region must carry a rich insect fauna. A survey at a more favourable time of year should prove most rewarding. It appears that the butterfly fauna somewhat parallels that of the nearby Shelburne Bay region as listed by Monteith and Hancock (1977). Only two species, *Telicota eurotas* and *Euploea sylvester*, remain unlisted by them. They, however, remarked on the apparent absence of *Euploea* during their survey (they took only *E. core*) and it would not be unreasonable to assume that all five *Euploea* species known to range widely on Cape York Peninsula occur both in the Shelburne Bay region and along the upper Jardine River.

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